

IN THE CLAIMS

1. (Currently amended) A method of rewriting a query during a database query processing operation, comprising the steps of:

processing the query having one or more target attributes in accordance with at least a portion of a data set producing query results;

analyzing ~~data attributes~~ the one or more target attributes and one or more auxiliary attributes from the query results; and

appending the query with at least one new predicate ~~from at least one~~ corresponding to at least one of the one or more auxiliary data attribute attributes.

2. (Original) The method of claim 1, wherein the at least a portion of the data set comprises sampled records from the data set.

3. (Original) The method of claim 2, further comprising the step of sampling data records from the data set.

4. (Currently amended) The method of claim 3, wherein the step of sampling data records comprises the step of sampling every Nth record from the data set, wherein N is a positive integer.

5. (Canceled)

6. (Canceled)

7. (Currently amended) The method of claim 1, wherein the step of analyzing ~~data attributes~~ the one or more target attributes and one or more auxiliary attributes comprises the steps of:

extracting statistics for each ~~attribute~~ of the one or more target attributes and the one or more auxiliary attributes from the query results;

extracting statistics for each ~~attribute~~ of the one or more target attributes and the one or more auxiliary attributes from the at least a portion of the data set;

and

evaluating a relative selectivity for each ~~attribute~~ of the one or more target attributes and the one or more auxiliary attributes.

8. (Currently amended) The method of claim 7, wherein the step of evaluating a relative selectivity comprises the steps of:

comparing a range of statistics from the query results to a range of statistics from the at least a portion of the data set for each ~~attribute~~ of the one or more target attributes and the one or more auxiliary attributes; and

determining whether each ~~attribute~~ of the one or more target attributes and the one or more auxiliary attributes is a selective attribute by comparing a ratio of the ranges to a predetermined value.

9. (Currently amended) The method of claim 1, wherein the step of appending the query with at least one new predicate comprises the steps of:

evaluating relative selectivity for each ~~data attribute~~ of the one or more target attributes and the one or more auxiliary attributes;

selecting at least one auxiliary data attribute with a high selectivity;

forming at least one new predicate; and

appending the ~~user~~ query with the at least one new predicate.

10. (Original) The method of claim 1, further comprising the step of performing a query processing operation on a data set with a rewritten query.

11. (Currently amended) Apparatus for rewriting a query during a database query processing operation, comprising:

a memory; and

at least one processor coupled to the memory and operative to: (i) process the query having one or more data attributes in accordance with at least a portion of a data set producing query results; (ii) analyze ~~data attributes~~ the one or more target attributes and one or more auxiliary attributes from the query results; and (iii) append the query with at least one new predicate ~~from at least one~~ corresponding to at least one of the one or more auxiliary data attribute attributes.

12. (Original) The apparatus of claim 11, wherein the at least a portion of the data set comprises sampled records from the data set.

13. (Original) The apparatus of claim 12, further comprising the operation of sampling data records from the data set.

14. (Currently amended) The apparatus of claim 13, wherein the operation of sampling data records comprises the step of sampling every Nth record from the data set, wherein N is a positive integer.

15. (Canceled)

16. (Canceled)

17. (Currently amended) The apparatus of claim 11, wherein the operation of analyzing ~~data attributes~~ the one or more target attributes and one or more auxiliary attributes comprises:

extracting statistics for each ~~attribute~~ of the one or more target attributes and the one or more auxiliary attributes from the query results;

extracting statistics for each ~~attribute~~ of the one or more target attributes and the one or more auxiliary attributes from the at least a portion of the data set; and

evaluating a relative selectivity for each ~~attribute~~ of the one or more target attributes and the

one or more auxiliary attributes.

18. (Currently amended) The apparatus of claim 17, wherein the operation of evaluating a relative selectivity comprises:

comparing a range of statistics for each ~~attribute~~ of the one or more target attributes and the one or more auxiliary attributes from the query results to a range of statistics to a corresponding attribute from the at least a portion of the data set; and

determining whether each ~~attribute~~ of the one or more target attributes and the one or more auxiliary attributes is a selective attribute by comparing a ratio of the ranges to a predetermined value.

19. (Currently amended) The apparatus of claim 11, wherein the operation of appending the query with at least one new predicate comprises the steps of:

evaluating relative selectivity for each ~~data attribute~~ of the one or more target attributes and the one or more auxiliary attributes;

selecting at least one auxiliary data attribute with a high selectivity;

forming at least one new predicate; and

appending the ~~user~~ query with the at least one new predicate.

20. (Original) The apparatus of claim 11, wherein the at least one processor is further operative to perform a query processing operation on a data set with a rewritten query.

21. (Currently amended) An article of manufacture for rewriting a query during a database query processing operation; comprising a machine readable medium containing one or more programs which when executed implement the steps of:

processing the query in accordance with at least a portion of a data set producing query results;

analyzing ~~data attributes~~ the one or more target attributes and one or more auxiliary attributes

from the query results; and

appending the query with at least one new predicate ~~from at least one~~ corresponding to at least one of the one or more auxiliary data attribute attributes.